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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/27/2001

Roger Cook

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05/25/2004

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EXAMINER

PHAM, LEDA T

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/995,052

Applicant(s)

COOK, ROGER

Examiner

Leda T. Pham

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10,11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,11 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to Amendment filed on 9/30/20.
2. Claims 1, 3 – 8, 10 – 11, and 13 - 17 are presented for examination.

In view of amendment, the examiner withdraws the last objections to the drawing about the rotary screw air compressor, and the 35 U.S.C. § 112, first paragraph rejection to claims 1– 8.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “the stator assembly is directly connected to the housing” in claim 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: in the amended specification, the last two lines are mismatching the reference number of the rotor 14 and the housing 19 (“housing 16” and “rotor 16”, and “second portion 19” and “housing 19”). Appropriate correction is required.

Claim Objections

5. Claim 15 is objected to because of the following informalities: “of flooded type” is misspelled (this is “oil-flooded type, isn’t it?). Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this claim, "the rotor" on first line of this claim is unclear, because there are two types of the rotor, the compressor rotor and the motor rotor. Therefore, "the rotor" should be change to -- the motor rotor--. Furthermore, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 5 –6 are rejected under 35 U.S.C. 102(b) as being anticipated by Noel et al. (U.S. Patent No. 4,547,135).

Referring to claim 1, Noel teaches a compressor and driving motor assembly, in which the motor (2) comprises a rotor (17) and a stator (18) assembly, and the compressor (1) comprises a main body (7) supporting first and second interengaged compressor rotors (4, 5), and a substantially horizontal drive shaft having first and second portions (3 and 16), wherein one of

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the first and second compressor rotors is mounted on the drive shaft first portion (3) and the motor rotor is mounted directly on the drive shaft second portion (16), the drive shaft first portion being vertically supported by the compressor main body and the drive shaft second portion is free of vertical support to provide cantilever support of the motor rotor (see abstract).

Referring to claim 5, Noel teaches the assembly in which the compressor (1) has a housing (the part outside the compressor 1), and the stator assembly (18) is connected to the housing of the compressor (through screws 19).

Referring to claim 6, Noel teaches the assembly in which the stator assembly (18) is directly connected to the housing (see figure).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noel in view of Luneau (U.S. Patent No. 4,079,278).

Referring to claim 3, Noel teaches the claimed invention, except for the added limitation of the driving motor being a hybrid permanent motor providing an induction mode and a permanent magnet mode.

Luneau teaches a Hybrid field permanent magnet motor that provides an induction mode and a permanent magnet mode for generating intended high field strength to accomplish commutation at higher horsepower.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Noel's motor with a hybrid permanent motor as taught by Luneau. Doing so would provide a motor with intended high field strength to accomplish commutation at higher horsepower.

12. Claims 4, 7 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noel as applied to claim 1 above, and further in view of Hartog (U.S. Patent No 5,246,349).

Referring to claim 4, Noel teaches the claimed invention, except for the added limitation of the motor rotor have a central longitudinal aperture fit to a corresponding tapered portion of the drive shaft second portion.

Hartog teaches a variable reluctance electric motor driven vacuum pump (figure 1) with the motor rotor have a central longitudinal aperture adapted to fit to a corresponding tapered portion of the drive shaft second portion (20) for securing the shaft in the motor rotor.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Noel's motor rotor as taught by Hartog. Doing so would secure the shaft in the motor rotor.

Referring to claim 7, Hartog teaches the assembly in which the stator assembly is connected to the housing by way of an adapter flange (14, figure 1).

Referring to claim 8, Hartog teaches the assembly in which the compressor is an air compressor.

13. Claims 10 - 11, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog in view of Luneau.

Referring to claim 10, Hartog teaches the claimed invention, except for the added limitation of the driving motor being a hybrid permanent motor providing an induction mode and a permanent magnet mode.

Luneau teaches a Hybrid field permanent magnet motor that provides an induction mode and a permanent magnet mode for generating intended high field strength to accomplish commutation at higher horsepower.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Noel's motor with a hybrid permanent motor as taught by Luneau. Doing so would provide a motor with intended high field strength to accomplish commutation at higher horsepower.

Referring to claim 11, Hartog teaches the assembly in which the compressor is an air compressor (figure 1).

Referring to claim 14, Hartog teaches the assembly in which the motor is a variable speed motor (variable speed).

Referring to claim 17, Hartog teaches the assembly in which the motor (10) comprises a motor rotor (18) which is mounted directly on to a drive shaft (20) extending from a compressor rotor (30) of the compressor (12).

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hartog and Luneau as applied to claim 10 above, and further in view of Kopko (U.S. Patent No. 5,947,854).

Referring to claim ~~13~~¹⁴, the combination of Hartog and Luneau teaches the claimed invention, except for the added limitation of the motor is a fixed speed motor.

Kopko teaches a motor for driving a compressor with a fixed speed motor type for increasing the speed of the compressor (see abstract).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fixed speed motor type as taught by Kopko for driving the compressor. Doing so would increase the speed of the compressor.

15. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hartog and Luneau as applied to claim 10 above, and further in view of Schibbye (U.S. Patent No. 3,848,422).

Referring to claim 15, the combination of Hartog and Luneau teaches the claimed invention, except for the added limitation of the compressor is oil-flooded type.

Schibbye teaches a device having a compressor with oil-flooded type for lubricating, sealing, and cooling the device.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the oil-flooded type compressor as taught by Schibbye for lubricating, sealing, and cooling the device.

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hartog and Luneau as applied to claim 10 above, and further in view of Suzuki (U.S. Patent No. 5,413,467).

Referring to claim 16, the combination of Hartog and Luneau teaches the claimed invention, except for the added limitation of the compressor is oil-free type.

Suzuki teaches a device having a compressor with oil-free type for producing a lean compressed air free of oil mist.

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Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the oil-free type compressor as taught by Suzuki. Doing so would produce a clean compressed air free of oil mist.

Response to Arguments

17. Applicant's arguments with respect to claim 1 - 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (571) 272-2032. The examiner can normally be reached on M-F (8:30-6:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leda T. Pham
Examiner
Art Unit 2834



TRAN NGUYEN
PRIMARY EXAMINER